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# CANADIAN PATENT

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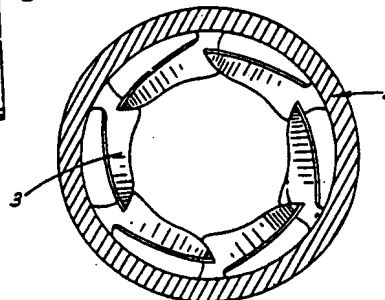
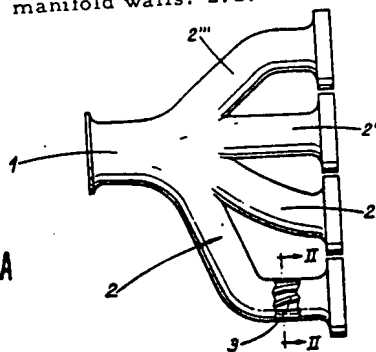
## INTAKE MANIFOLD FOR INTERNAL COMBUSTION ENGINES

FABR/  
Intake manifold for internal combustion engines - has angled fins near  
each connection with engine cylinder block  
FABREGAT F P 05.02.72-ES-176907  
Q53 (22.07.75) F02m-00/

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An intake manifold for internal combustion engines, has the internal wall of each duct leading to the engine block fitted with a series of radial fins angled with respect to the theoretical axis of the ducts which fins cause a fuel mixture passing through it to become turbulent thereby increasing the atomization of the mixture and thus effect a more complete combustion. The general shape of the manifold is as known with a single carburettor feeding ducts for four cylinders. The internal fins are positioned just inside the four connections to the cylinder block and impart a swirl to the mixture to remove liquid petrol from the manifold walls. 2.2.73 as 162834 (5 pp).

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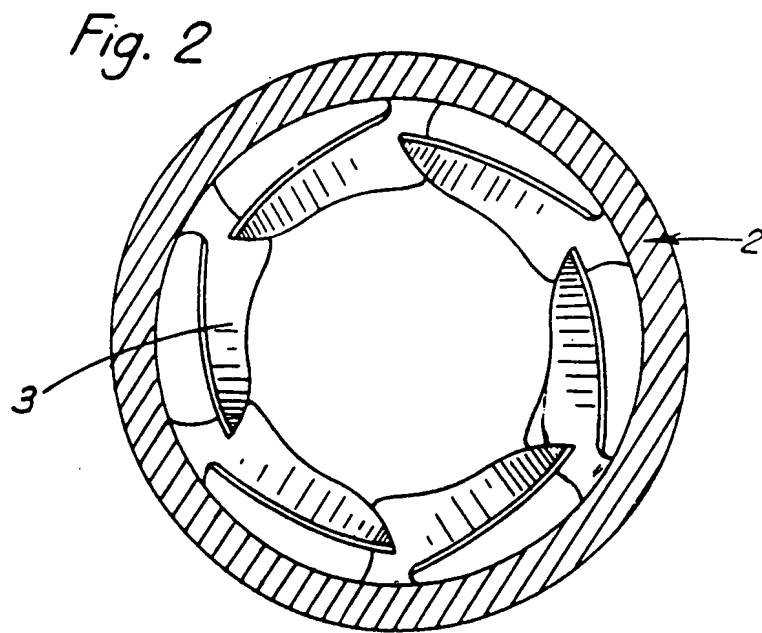
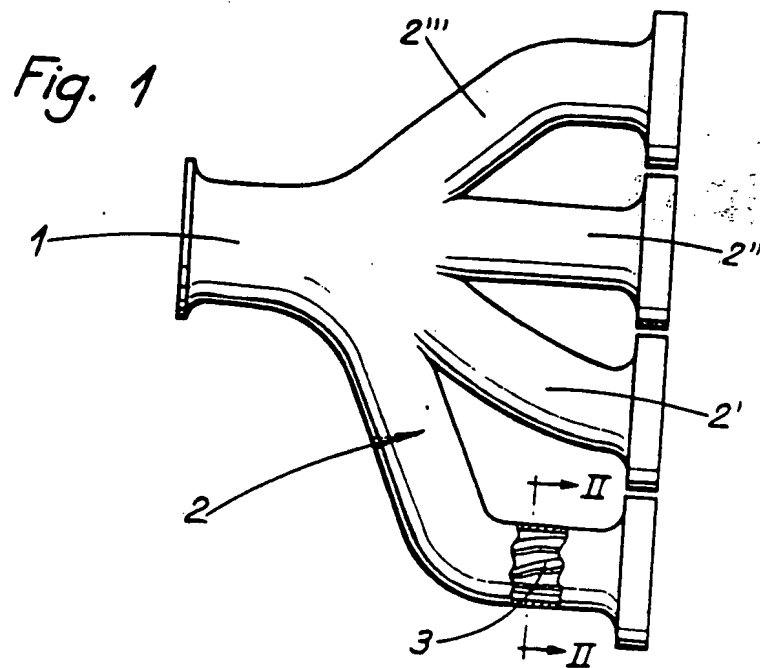
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The invention refers to improved intake manifolds and the like, for internal combustion engines.

The present invention relates to the application of gasifying means to internal combustion engines, which means are provided with a series of fins radially projecting from a ring, a bushing or the like, at a certain rake angle with respect to the theoretical axis. Prior installations have been either at the carburetor's liner, at the catch-basin inlet of the air-petrol mixture, or at some other suitable place. With these arrangements, a fuel mixture when passing through the assembly was caused to become turbulent thereby assisting in the atomizing of the same and consequently, contributing to a more complete combustion at the cylinders.

The present invention provides an intake manifold for internal combustion engines, wherein the internal wall of each of ducts leading to an engine block include a series of radial fins angled with respect to the theoretical axis of the ducts which fins cause a fuel mixture passing therethrough to become turbulent thereby increasing the atomization of the mixture and thus effecting a more complete combustion.

The invention will now be described, by way of example, reference being had to the accompanying drawings, in which:

Figure 1 is a plan view of an intake manifold for a conventional internal combustion engine, partially sectioned, and

Figure 2 is a section of one of the intake manifold ducts of an internal combustion engine, as per section II-II of Figure 1.

According to the drawings, the intake manifold for internal combustion engines, comprises a duct 1 to be connected to the carburetor, and by ducts 2, 2', 2" and 2'", to be connected to the intake nozzles of an engine block.



Each of ducts 2, 2', 2'', and 2''', integrally carry on their internal surfaces a series of radially arranged fins 3 having certain rake respective to the theoretical axis of the duct, (Figure 2). The fins achieve, when the fuel mixture passes therethrough, a special turbulence effect over the same which contributes to its atomization. The result being that there is increased CO reduction in the exhaust gases, an overall power increase, a fuel consumption decrease, and a more complete combustion at the cylinders.

The invention within its essentiality, can be practically performed in other embodying forms which only differ in detail from that shown only as an example. Thus, the intake manifold can be utilized for internal combustion engines, in any shape and size with the materials and means most convenient.

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THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE  
PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. An intake manifold for internal combustion engines, wherein the internal wall of each of ducts leading to an engine block include a series of radial fins angled with respect to the theoretical axis of the ducts which fins cause a fuel mixture passing therethrough to become turbulent thereby increasing the atomization of the mixture and thus effecting a more complete combustion.